

Section 2-2: Inverse Variation

Warm-up: y varies directly as the square of x . If $y = 63$ when $x = 3$,

a. Find y when $x = 9$

b. Find y when $x = 5$

Review: Direct Variation

- Wording for Direct Variation
- General Equation
- Constant of Variation
- Steps to Solve

“ t Varies Inversely as s ”:

Inverse Variation Function:

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***The intensity of the light varies inversely as the square of the distance from the light source.

Example 1: Rewrite the statement, “The intensity of the light varies inversely as the square of the distance from the light source.”

Example 2: In a room, the floor space F per person varies inversely as the square of the number of people P in the room. Write an equation to represent this situation.

Example 3: The time T required to do a job varies inversely as the number of workers w . It takes 5 hours for 8 cement workers to do a job. How long would it take 12 workers to do the same job?

Steps to solving an inverse variation problem:

- 1.
- 2.
- 3.
- 4.

Example 4: g is inversely proportional to h . If $g = 3$ when $h = 6$, find g when $h = 9$.

Homework:

"THE WORLD IS MOVING SO FAST THESE DAYS THAT THE MAN WHO SAYS
IT CAN'T BE DONE IS GENERALLY INTERRUPTED BY SOMEONE DOING IT." -
HARRY EMERSON FOSDICK (1878 - 1969)